New Driver

User Manual

- Manual #: RGB-RD-UM-SD E001
- Revision: V1.1

New Driver·User Manual

Thank you for choosing our products!
In order to allow you to learn how to use New Driver quickly, we bring you the detailed user manual. You can read the introduction and directions before using New Driver, please read all the information we provide carefully to use our products correctly.

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Operators Safety Summary

The general safety information in this summary is for operating personnel.

Do Not Remove Covers or Panels

There are no user-serviceable parts within the unit. Removal of the top cover will expose dangerous voltages. To avoid personal injury, do not remove the top cover. Do not operate the unit without the cover installed.

Power Source

This product is intended to operate from a power source that will not apply more than 230 volts rms between the supply conductors or between both supply conductor and ground. A protective ground connection by way of grounding conductor in the power cord is essential for safe operation.

Grounding the Product

This product is grounded through the grounding conductor of the power cord. To avoid electrical shock, plug the power cord into a properly wired receptacle before connecting to the product input or output terminals. A protective-ground connection by way of the grounding conductor in the power cord is essential for safe operation.

Use the Proper Power Cord

Use only the power cord and connector specified for your product. Use only a power cord that is in good condition. Refer cord and connector changes to qualified service personnel.

Use the Proper Fuse

To avoid fire hazard, use only the fuse having identical type, voltage rating, and current rating characteristics. Refer fuse replacement to qualified service personnel.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere.

Terms In This Manual and Equipment Marking

WARNING

Highlights an operating procedure, practice, condition, statement, etc, which, if not strictly observed, could result in injury or death of personnel.

Note

Highlights an essential operating procedure, condition or statement.

CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Change History

The table below lists the changes to the New Driver.

Format	Time	ECO#	Description	Principal
1.0	2014-07-22	0000	Release	Vira
1.1	2015-10-08	0001	1. Update the front and back panel. 2. Update the menu tree.	Vira

CONTENT

CONTENT **8**

1. Introduction **11**

Chapter Structure 12

How to Use This Manual 13

Terms and Definitions 14

System Overview 20

Application Questions 21

2. Hardware Orientation **22**

In This Chapter 22

New Driver Back Panel 23

1: Dial Switch 23

2. 3: RS232 Control Port 23

4. 5: Cable Output of Sending Card 24

6: Audio Input 24

7: DVI Input 24

8: HDMI Input 24

9,10: Power Interface and Switch 24

New Driver Front Panel 25

1: LCD Panel 25

2: Knob 25

3: Menu and Back Button.....25

4: USB Control Port of Sending Card 25

5: LED Indicator.....25

3. Hardware Installation.....26

In This Chapter.....26

Safety Precautions.....27

Unpacking and Inspection.....27

Site Preparation.....27

4. Menu Orientation.....28

In This Chapter.....28

MENU.....29

QUICK CONNECTION.....29

SENIOR 31

LANGUAGE 31

FACTORY RESET 31

5. System Setup and Operations 33

In This Chapter.....33

How to Connect.....34

How to Work 35

How to Cascade the Device.....36

How to Realize LED Screen Connection.....38

A Specification 44

B Contact Information.....45

C Sending Card Installation 46

1. Introduction

This chapter is designed to introduce you to the New Driver User Manual. Areas to be covered are:

- Chapter Structure
- How to Use This Manual
- Terms and Definitions
- System Overview
- Application Questions

Chapter Structure

The following chapters provide instructions for all aspects of New Driver operations:

Chapter 1 Introduction

Chapter 2 Hardware Orientation

Chapter 3 Hardware Installation

Chapter 4 Menu Orientation

Chapter 5 System Setup and Operations

Appendix A Specification

Appendix B Contact Information

Appendix C Sending Card Installation

How to Use This Manual

Following are important tips for streamlining your use of this User Manual in its electronic “PDF” form.

Navigating

Use Acrobat Reader’s “bookmarks” to navigate to the desired location. All chapter files have the same bookmark structure for instant navigation to any section. Please note:

- Extensive hyperlinks are provided within the chapters.
- Use Acrobat’s “**Go to Previous View**” and “**Return to next View**” buttons to trace your complete navigational path.

- Use the “**Previous Page**” and “**Next Page**” buttons to go to the previous or next page within a file.
- Use Acrobat’s extensive search capabilities, such as the “**Find**” tool and “**Search Index**” tool to perform comprehensive searches as required.

Table of Contents and Index

Use the Table of Contents bookmarks to navigate a desired topic. Click any item to instantly jump to that section of the guide. User can also use the **Index** to jump to specific topics within a chapter. Each page number in the **Index** is a hyperlink.

Terms and Definitions

The following terms and definitions are used throughout this guide.

- **"ASCII":** American Standard for Information Interchange. The standard code consisting of 7-bit coded characters (8 bits including parity check) used to exchange information between data processing systems, data communication systems, and associated equipment. The ASCII set contains control characters and graphic characters.
- **"Aspect ratio":** The relationship of the horizontal dimension to the vertical dimension of an image. In viewing screens, standard TV is 4:3, or 1.33:1; HDTV is 16:9, or 1.78:1. Sometimes the ":1" is implicit, making TV = 1.33 and HDTV = 1.78.
- **"AV":** Audio visual, or audio video.
- A **"Background"** is an unscaled source, typically originating from a computer. A background source appears at the system's lowest priority — visually in back of all other sources.
- **"Baudrate"：** Named of J.M.E. Baudot, the inventor of the Baudot telegraph code. The number of the electrical oscillations per second, called baud rate. Related to, but not the same as, transfer rate in bits per second (bps).
- **"Blackburst":** The video waveform without the video elements. It includes the vertical sync, horizontal sync, and the chroma burst information. Blackburst is used to synchronize video equipment to align the video output. One signal is normally used to set up an entire video system or facility. Sometimes it is called House sync.
- **"BNC":** Bayonet Neill-Concelman. A cable connector used extensively in television and named for its inventors. A cylindrical bayonet connector that operates with a twist-locking motion. To make the connection, align the two curved grooves in the collar of the male connector with the two projections on the outside of the female collar, push, and twist. This allows the connector to lock into place without tools.
- **"Brightness":** Usually refers to the amount or intensity of video light produced on a screen without regard to color. Sometimes called "black level.
- "**CAT 5**"**:** Category 5. Describes the network cabling standard that consists of four unshielded twisted pairs of copper wire terminated by RJ-45 connectors. CAT 5 cabling supports data rates up to 100 Mbps. CAT 5 is based on the EIA/TIA 568 Commercial Building Telecommunications Wiring Standard.
- **"Color bars":** A standard test pattern of several basic colors (white, yellow, cyan, green, magenta, red, blue, and black) as a reference for system alignment and testing. In NTSC video, the most commonly

used color bars are the SMPTE standard color bars. In PAL video, the most commonly used color bars are eight full field bars. In the computer, the most commonly used color bars are two rows of reversed color bars.

- **"Color burst":** In color TV systems, a burst of subcarrier frequency located on the back porch of the composite video signal. This serves as a color synchronizing signal to establish a frequency and phase reference for the chroma signal. Color burst is 3.58 MHz for NTSC and 4.43 MHz for PAL.
- **"Color temperature":** The color quality, expressed in degrees Kelvin(K), of a light source. The higher the color temperature, the bluer the light. The lower the temperature, the redder the light. Benchmark color temperature for the A/V industry include 5000°K, 6500°K, and 9000°K.
- **"Contrast ratio":** The radio of the high light output level divided by the low light output level. In theory, the contrast radio of the television system should be at least 100:1, if not 300:1. In reality, there are several limitations. In the CRT, light from adjacent elements contaminate the area of each element. Room ambient light will contaminate the light emitted from the CRT. Well-controlled viewing conditions should yield a practical contrast ratio of 30:1 to 50:1.
- **"DVI":** Digital Visual Interface. The digital video connectivity standard that was developed by DDWG (Digital Display Work Group). This connection standard offers two different connectors: one with 24 pins that handles digital video signals only, and one with 29 pins that handles both digital and analog video.
- **"EDID":** Extended Display Identification Data – EDID is a data structure used to communicate video display information, including native resolution and vertical interval refresh rate requirements, to a source device. The source device will then output the optimal video format for the display based on the provided EDID data, ensuring proper video image quality. This communication takes place over the DDC – Display Data Channel.
- **"Ethernet":** A Local Area Network (LAN) standard officially known as IEEE 802.3. Ethernet and other LAN technologies are used for interconnecting computers, printers, workstations, terminals, servers, etc. within the same building or campus. Ethernet operates over twisted pair and over coaxial cable at speeds starting at 10Mbps. For LAN interconnectivity, Ethernet is physical link and data link protocol reflecting the two lowest layers of the OSI Reference Model.
- **"Frame":** In interlaced video, a frame is one complete picture. A video frame is made up of two fields, or two sets of interlaced lines. In a film, a frame is one still picture of a series that makes up a motion picture.

1. Introduction

Terms and Definitions

- **“Gamma”:** The light output of a CRT is not linear with respect to the voltage input. The difference between what you should have and what is actually output is known as gamma.
- **“HDMI” - High – Definition Multimedia Interface:** An interface used primarily in consumer electronics for the transmission of uncompressed high definition video, up to 8 channels of audio, and control signals, over a single cable. HDMI is the de facto standard for HDTV displays, Blu-ray Disc players, and other HDTV electronics. Introduced in 2003, the HDMI specification has gone through several revisions.
- **“HDSDI”:** The high-definition version of SDI specified in SMPTE-292M. This signal standard transmits audio and video with 10 bit depth and 4:2:2 color quantization over a single coaxial cable with a data rate of 1.485 Gbit/second. Multiple video resolutions exists including progressive 1280x720 and interlaced 1920x1080 resolution. Up to 32 audio signals are carried in the ancillary data.
- **“JPEG” (Joint photographic Expects Group):** Commonly used method of lossy compression for photographic images using a discreet cosine transfer function. The degree of compression can be adjusted, allowing a selectable tradeoff between storage size and image quality. JPEG typically achieves 10:1 compression with little perceptible loss in image quality. Produces blocking artifacts.
- **“MPEG”:** Motion Picture Expect Group. A standard committee under the auspices of the International Standards Organization working on algorithm standards that allow digital compression, storage and transmission of moving image information such as motion video, CD-quality audio, and control data at CD-ROM bandwidth. The MPEG algorithm provides inter-frame compression of video images and can have an effective compression rate of 100:1 to 200:1.
- **“NTSC”:** The color video standard used in North America and some other parts of the world created by the National Television Standards Committee in the 1950s. A color signal must be compatible with black-and-white TV sets. NTSC utilizes an interlaced video signals, 525 lines of resolution with a refresh rate of 60 fields per second (60 Hz). Each frame is comprised of two fields of 262.5 lines each, running at an effective rate of 30 frames per second.
- **“Operator”:** Refers to the person who uses the system.
- **“PAL”:** Phase Alternate Line. A television standard in which the phase of the color carrier is alternated from line to line. It takes four full pictures (8 fields) for the color-to-horizontal phase relationship to return to the reference point. This alternation helps cancel out phase errors. For this reason, the hue control is not needed on a PAL TV set. PAL, in many transmission forms, is widely used in Western Europe,

Australia, Africa, the Middle East, and Micronesia. PAL uses 625-line, 50-filed (25 fps) composite color transmission system.

- **"PIP":** Picture-in-Picture. A small picture within a larger picture created by scaling down one of the images to make it smaller. Each picture requires a separate video source such as a camera, VCR, or computer. Other forms of PIP displays include Picture-by-Picture (PBP) and Picture-with-Picture (PWP), which are commonly used with 16:9 aspect display devices. PBP and PWP image formats require a separate scaler for each video window.
- **"Polarity":** The positive and negative orientation of a signal. Polarity usually refers to the direction or a level with respect to a reference (e.g. positive sync polarity means that sync occurs when the signal is going in the positive direction).
- **"RJ-45":** Registered Jack-45. A connector similar to a telephone connector that holds up to eight wires, used for connecting Ethernet devices.
- "**RS-232":** An Electronic Industries Association (EIA) serial digital interface standard specifying the characteristics of the communication path between two devices using either DB-9 or DB-25 connectors. This standard is used for relatively short-range communication and does not specify balanced control lines. RS-232 is a serial control standard with a set number of conductors, data rate, word length, and type of connector to be used. The standard specifies component connection standards with regard to the computer interface. It is also called RS-232-C, which is the third version of the RS-232 standard, and is functionally identical to the CCITT V.24 standard.
- **"Saturation":** Chroma, chroma gain. The intensity of the color, or the extent to which a given color in any image is free from white. The less white in a color, the truer the color or the greater its saturation. On a display device, the color control adjusts the saturation. Not to be confused with the brightness, saturation is the amount of pigment in a color, and not the intensity. Low saturation is like adding white to the color. For example, a low-saturated red looks pink.
- **"Scaling":** A conversion of a video or computer graphic signal from a starting resolution to a new resolution. Scaling from one resolution to another is typically done to optimize the signal for input to an image processor, transmission path or to improve its quality when presented on a particular display.
- **"SDI":** Serial Digital Interface. The standard based on a 270 Mbps transfer rate. This is a 10-bit, scrambled, polarity independent interface with common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio.
- **"Seamless Switching":** A feature found on many video switchers. This

feature causes the switcher to wait until the vertical interval to switch. This avoid a glitch (temporary scrambling) which normally is seen when switching between sources.

- **"SMPTE":** Society of Motion Picture and Television Engineers. A global organization, based in the United States, that sets standards for baseband visual communications. This includes film as well as video and television standards.
- **"S-Video":** A composite video signal separated into the luma ("Y" is for luma, or black and white information; brightness) and the chroma ("C" is an abbreviation for chroma, or color information).
- **"Sync":** Synchronization. In video, sync is a means of controlling the timing of an event with respect to other events. This is accomplished with timing pulses to insure that each step in a process occurs at the correct time. For example, horizontal sync determines exactly when to begin each horizontal scan line. Vertical sync determines when the image is to be refreshed to start a new field or frame. There are many other types of sync in video system.(Also known as "sync signal" or "sync pulse.")
- **"TCP/IP":** Transmission Control Protocol/Internet Protocol. The communication protocol of the Internet. Computers and devices with direct access to the Internet are provided with a copy of the TCP/IP program to allow them to send and receive information in an understandable form.
- **"USB":** Universal Serial Bus. USB was developed by seven PC and telecom industry leaders (Compaq, DEC, IBM, Intel, Microsoft, NEC, and Northern Telecom). The goal was easy plug-and-play expansion outside the box, requiring no additional circuit cards. Up to 127 external computer devices may be added through a USB hub, which may be conveniently located in a keyboard or monitor. USB devices can be attached or detached without removing computer power. The number of devices being designed for USB continues to grow, from keyboards, mice, and printers to scanners, digital cameras, and ZIP drives.
- **"VESA":** Video Electronics Standards Association. A nonprofit number organization dedicated to facilitating and promoting personal computer graphics through improved standards for the benefit of the end-user. www.vesa.org
- **"VGA":** Video Graphics Array. Introduced by IBM in 1987, VGA is an analog signal with TTL level separate horizontal and vertical sync. The video outputs to a 15-pin HD connector and has a horizontal scan frequency of 31.5 kHz and vertical frequency of 70 Hz (Mode 1, 2) and 60 Hz (Mode 3). The signal is non-interlaced in modes 1, 2, and 3 and interlaced when using the 8514/A card (35.5 kHz, 86 Hz) in mode 4. It

has a pixel by line resolution of 640×480 with a color palette of 16 bits and 256,000 colors.

- **“YCrCb”:** Used to describe the color space for interlaced component video.
- **“YPbPr”:** Used to describe the color space for progressive-scan (non-interlaced) component video.

System Overview

New Driver controller is the only piece of equipment between the video source and your LED screen. The New Driver takes digital video through HDMI and DVI inputs, where HDMI is the first priority, when HDMI signal is lost, it will auto switch to the DVI.

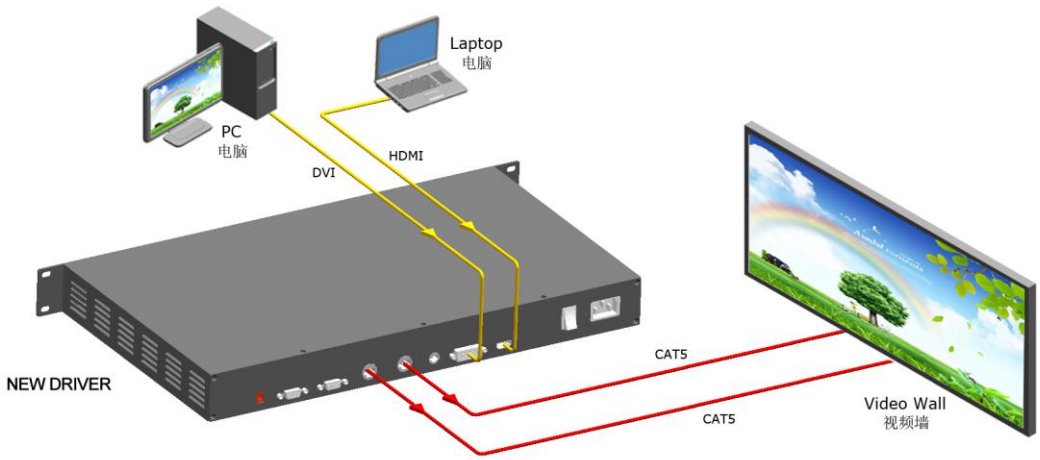
New Driver is compatible with LINSN TS 802 and Colorlight T7.

Compare with normal RJ45 connector, New Driver controller use an etherCON soft-patched connectors so as to make sure lock connection and better protection for the CAT5 cable.

New Driver also comes with the EDID management function, and integrates with the display connection, brightness adjustment and GAMMA correction functions, so the New Driver can work totally standard without laptop or PC.

Application Questions

RGBlink offers solutions to demanding technical problems. Any application questions, or required further information, please contact with our customer Support Engineers. Refer to Appendix B for contact details.



2. Hardware Orientation

In This Chapter

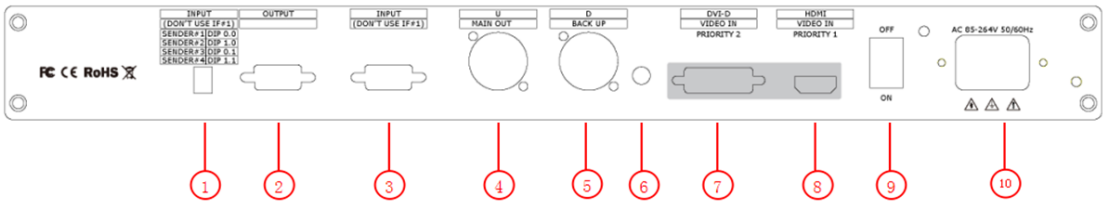
This chapter provides detailed information about the New Driver hardware.

The following topic is discussed:

- New Driver Back Panel
- New Driver Front Panel

New Driver Back Panel

The figure below illustrates the professional interface and control signals of New Driver back panel:



NO	INTERFACE	NO	INTERFACE
1	Cascade Dial Switch	7	DVI Input
2. 3	RS232 Control Port	8	HDMI Input
4. 5	Cable Output of Sending Card	9	Switch
6	Audio Input	10	Power

1: Dial Switch

Dial switch 1 and dial switch 2 upward: Operation for the first controller.

Dial switch 1 downward and dial switch 2 upward: Operation for the second controller.

Dial switch 1 upward and dial switch 2 downward: Operation for the third controller.

Dial switch 1 and dial switch 2 downward: Operation for the fourth controller.

Note

Dial switch operation only when cascade, and cascade is only available for Linsn sending card.

2. 3: RS232 Control Port

2: OUTPUT is serial female port.

3: INPUT is serial male port.

RS 232 INPUT connect serial communication interface of RS232 control protocol. RS232 OUTPUT is serial communication interface of multiple devices cascading control, can connect devices through DB9 serial cable. It can cascade 4 sets of devices currently.

4. 5: Cable Output of Sending Card

Connect to LED screen through cable.

6: Audio Input

Audio input. Connect to microphone or the device with audio interface.

7: DVI Input

DVI input. Input the video signal from computer, DVI signal generator. Connect to the same DVI interface.

(This connector does not support hot-plugging).

8: HDMI Input

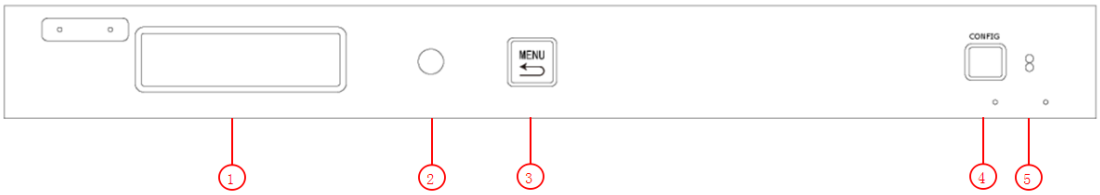
HDMI input. Input the image signal from computer.

9,10: Power Interface and Switch

AC 85-264V 2A 50/60Hz IEC-3 power interface.

New Driver Front Panel

New Driver front panel is as following:



NO	INTERFACE	NO	INTERFACE
1	LCD Panel	4	USB Control Port of Sending Card
2	Knob	5	LED Indicator
3	Menu and Back Button		

1: LCD Panel

Used to show button menu and menus for interactive communication.

2: Knob

Used to adjust LCD menu and information interaction and with the same function with enter to confirm current options.

3: Menu and Back Button

Push the button, it will return to the last level menu.

4: USB Control Port of Sending Card

Remote communication device controls interface, and is used to connect the computer.

5: LED Indicator

Red: Power indicator, it lights when device has power supply.

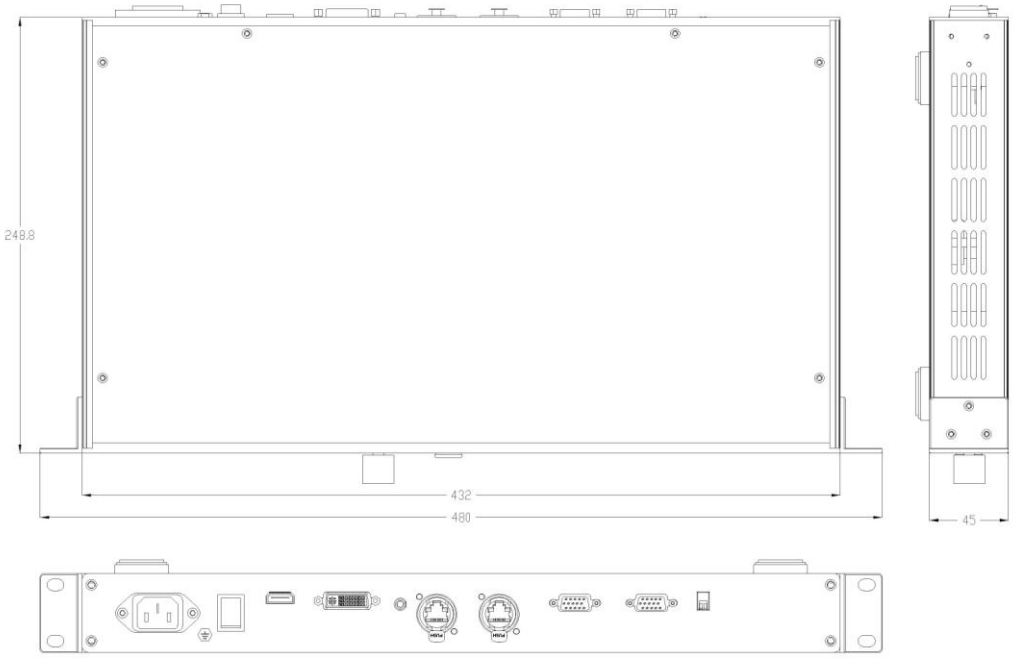
Green: Signal indicator, it lights when device has signal input.

3. Hardware Installation

In This Chapter

This chapter provides comprehensive installation instruction for New Driver hardware:

Following is the size of New Driver for your reference:



Safety Precautions

For all New Driver installation procedures, please observe the following important safety and handling rules to avoid damage to yourself and the equipment.

- To protect users from electric shock, ensure that the chassis connects to earth via the ground wire provided in the AC power Cord.
- The AC Socket-outlet should be installed near the equipment and be easily accessible.

Unpacking and Inspection

Before opening New Driver shipping box, inspect it for damage. If you find any damage, notify the shipping carrier immediately for all claims adjustments. As you open the box, compare its contents against the packing slip. If you find any shortages, contact your sales representative.

Once you have removed all the components from their packaging and checked that all the listed components are present, visually inspect the system to ensure there was no damage during shipping. If there is damage, notify the shipping carrier immediately for all claims adjustments.

Site Preparation

The environment in which you install New Driver should be clean, properly lit, free from static, and have adequate power, ventilation, and space for all components.

4. Menu Orientation

In This Chapter

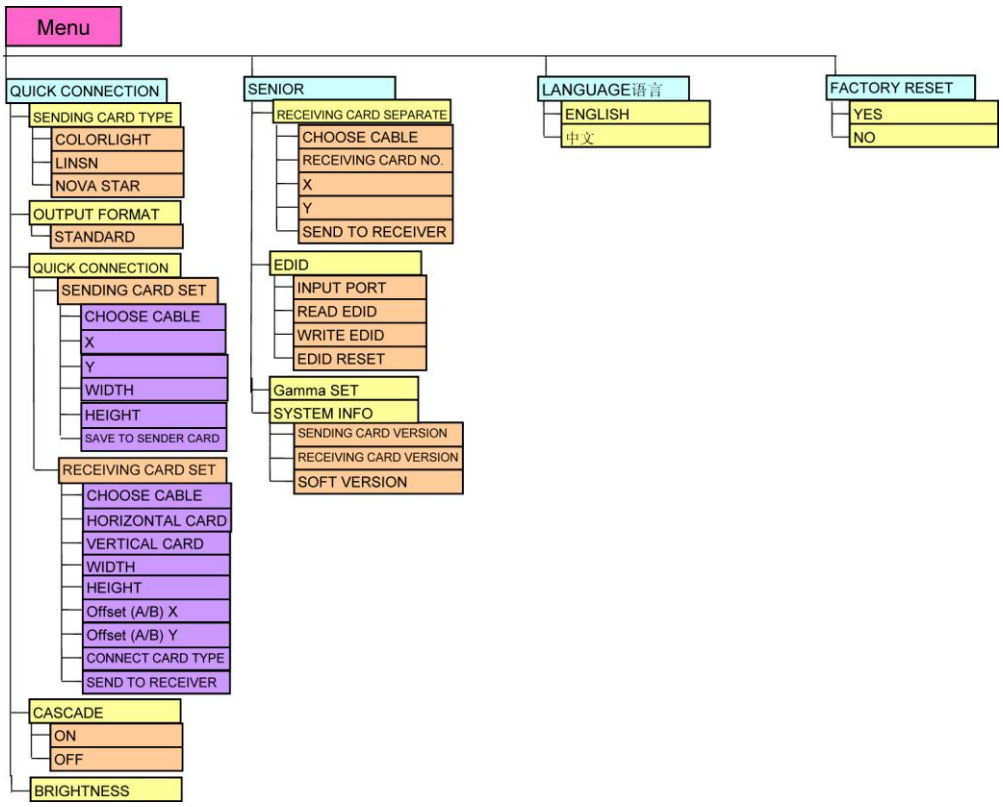
This chapter describes all New Driver controller menus, including the functions that are available, and descriptions of each menu tree (in block diagram format).

The following topics are discussed:

- **MENU**
  - QUICK CONNECTION
  - SENIOR
  - LANGUANE
  - FACTORY RESET

MENU

Push the [MENU] button to the menu items, which shown as follows. Turn the knob to select menu item and push the knob to enter to the corresponding setting or view the menu.



QUICK CONNECTION

Select [QUICK CONNECTION], push the knob to confirm, and show level 2 menus as follows:

SENDING CARD TYPE: New Driver V1.1 supports three kinds of sending card, LINSN TS 802, NOVA STAR MSD 300 and COLORLIGHT T7.

OUTPUT FORMAT: The output format is different according to different sending card. The following are the output formats for COLORLIGHT and LINSN sending card (New Driver V1.1 can not support NOVA STAR).

COLORLIGHT: 1024×768, 1280×720, 1280×1024, 1600×768, 1920×640, 1920×1080.

4. Menu Orientation

MENU

LINSN: 640×480, 800×600, 1024×768, 1280×768, 1280×800, 1280×1024, 1366×768, 1440×900, 1440×1080, 1600×576, 1600×900, 1600×1000, 1600×1200, 1680×1050, 1728×1296, 1920×1080, 1920×1200, 2048×1152, 2048×1280, 2560×1440, 2560×1600.

QUICK CONNECTION: Including sending card set and receiving card set.

SENDING CARD SET: Including the following settings:

CHOOSE CABLE: User can choose PORT A or PORT B (PORT A or PORT B is for Colorlight, and PORT D or PORT U is for Linsn).

X: Set the start point X.

Y: Set the start point Y.

WIDTH: Set the width.

HEIGHT: Set the height.

SAVE TO SENDER CARD: Save the parameters to sender card after setting.

RECEIVING CARD SET: Including the following settings:

CHOOSE CABLE: User can choose PORT A or PORT B (PORT A or PORT B is for Colorlight, and PORT D or PORT U is for Linsn).

HORIZONTAL CARD: Set the horizontal card.

VERTICAL CARD: Set the vertical card.

WIDTH: Set the width.

HEIGHT: Set the height.

Offset (A/B) X: Set offset (A/B) X.

Offset (A/B) Y: Set offset (A/B) Y.

CONNECT CARD TYPE: There are 8 kinds of connection mode currently. Send to receiver after setting.

SEND TO RECEIVER: Send to receiver after setting.

CASCADE: User can choose “ON” or “OFF” to enable or disable the cascade function.

BRIGHTNESS: The brightness adjustment range is between 1%~100%.

4. Menu Orientation

MENU

SENIOR

Select [SENIOR], push the knob to confirm, and show level 2 menus as follows:

RECEIVING CARD SEPARATE: Including the following settings:

CHOOSE CABLE: User can choose PORT A or PORT B (PORT A or PORT B is for Colorlight, and PORT D or PORT U is for Linsn).

RECEIVING CARD NO.: Choose the number of receiving card that to be set.

X: Set the start point X.

Y: Set the start point Y.

SEND TO RECEIVER: Send to receiver after setting.

EDID: Including the following settings:

INPUT PORT: User can choose DVI or HDMI signal.

READ EDID: Choose the output port and read the EDID of sending card.

WRITE EDID: Choose the output port and write EDID.

EDID RESET: Choose the output port and reset EDID.

Gamma: The gamma adjustment range is between 1.0~4.0.

SYSTEM INFO: Including the follows:

SENDING CARD VERSION: Show the sending card version.

RECEIVING CARD VERSION: Show the sending card version.

SOFT VERSION: Show the device soft version.

LANGUAGE

Through this option, user can choose Chinese or English according to their needs to operate the interface more quickly.

FACTORY RESET

Enter Factory Reset to reset the IP, push the knob to confirm, and New

4. Menu Orientation

MENU

Driver is reset to its factory settings. After 5 seconds, it completes factory settings and is ready for more operations.

5. System Setup and Operations

In This Chapter

This chapter provides comprehensive instructions for system setup and operations. The following topics are discussed:

- How to Connect
- How to Work
- How to Cascade the Device
- How to Realize LED Screen Connection

How to Connect

Connect the HDMI output of computer to the HDMI input interface with HDMI cable.

Connect the DVI player or computer with DVI interface to the DVI interface with DVI cable.

Connect the receiving card of LED Display to the Gigabit Copper Port with cable.

Plug in power cord with IEC connector.

If need to connect to the computer for control, connect the computer to the USB control port of sending card with USB cable.

How to Work

Switch ON the power button, then the red indicator will glow to indicate the device is in normal operation. When the both DVI and HDMI signals are given as inputs to the device, the green signal indicator lights up. Since the HDMI is the first priority than the DVI signal, so that the output will be the HDMI signal. When the HDMI signal cable is pulled out, the green signal indicator lights up, then the device output is the DVI signal.

How to Cascade the Device

1. Push the [MENU] of Device 2, turn the knob, choose <CASCADE> in <QUICK CONNECTION> option, and set as “ON”.
2. Connect the computer and Device 1 with USB cable, then connect the male port of DB9 serial line to the female port of Device 1, and connect the female port of DB9 serial line to the male port of Device 2.
3. Set cascade dial switch 1 downwards, and set cascade dial switch 2 upwards, then Device 1 and Device 2 cascade is finished.
4. Push the [MENU] of Device 3, turn the knob, choose <CASCADE> in <QUICK CONNECTION> option, and set as “ON”.
5. Connect the male port of DB9 serial line to the female port of Device 2, and connect the female port of DB9 serial line to the male port of Device 3.
6. Set cascade dial switch 1 upwards, and set cascade dial switch 2 downwards, then Device 2 and Device 3 cascade is finished.
7. Push the [MENU] of Device 4, turn the knob, choose <CASCADE> in <QUICK CONNECTION> option, and set as “ON”.
8. Connect the male port of DB9 serial line to the female port of Device 3, and connect the female port of DB9 serial line to the male port of Device 4.
9. Set cascade dial switch 1 and cascade dial switch 2 downwards, then Device 3 and Device 4 cascade is finished.

   Currently, it can cascade 4 sets of device, it is only available for Linsn sending card currently.

Note

DB9 serial male port	DB9 serial female port

5. System Setup and Operations

How to Cascade the Device

Note

Cascade is only for upper computer control of sending card.

How to Realize LED Screen Connection

New Driver can realize two connection as follows connecting the Port D or Port U of one sending card to LED screen and connecting the both Port D and Port U of one sending card to LED screen (PORT A or PORT B is for Colorlight, and PORT D or PORT U is for Linsn). The following are the detailed operation steps of the three connection.

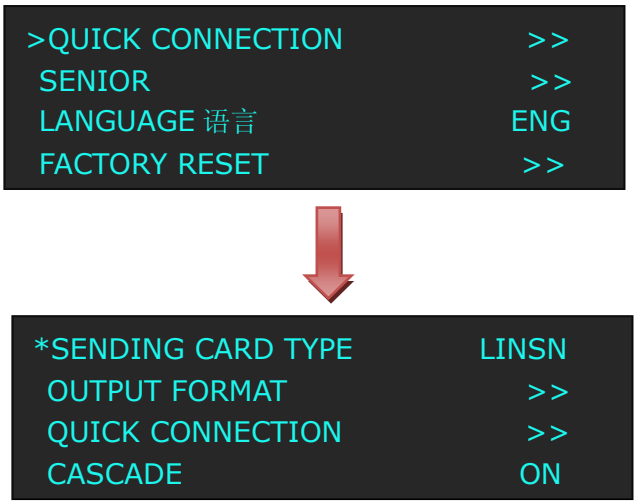
1. Connect the Port D or Port U of One Sending Card to LED Screen

(1) First, make sure that the device is in normal operation. The red power indicator lights when the device has power supply and the green signal indicator lights when device has signal input.

(2) Choose the input source, for example, DVI.

(3) Connect the cable to Port U.

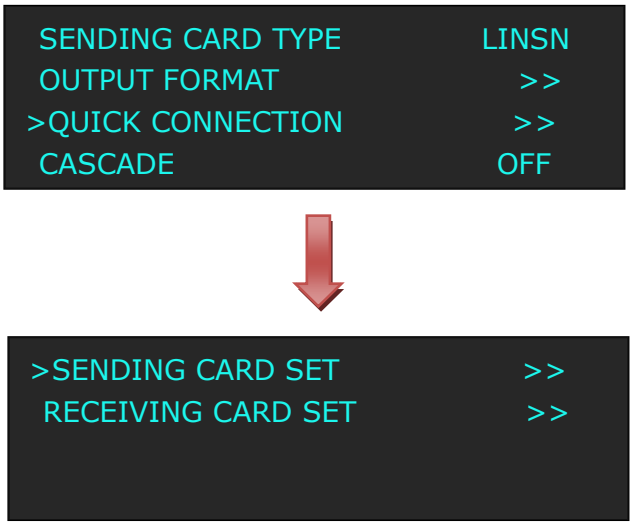
(4) Turn the knob, choose <SENDING CARD TYPE> in <QUICK CONNECTION> option, push the knob to confirm, turn the knob, choose the sending card type, for example, Choose Linsn (New Driver can only support Linsn and Colorlight sending card). Shown as follows:



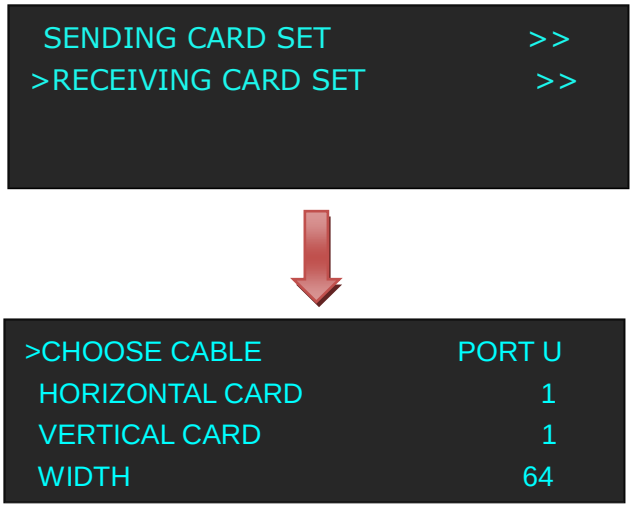
(5) After setting, turn the knob, choose <QUICK CONNECTION>, push the knob to confirm for next setting, shown as follows:

5. System Setup and Operations

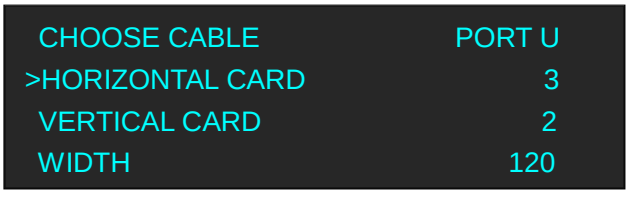
How to Realize LED Screen Connection



(6) Turn the knob, choose <RECEIVING CARD SET>, push the knob to confirm. Turn the knob again, and choose <CHOOSE CABLE>, push the knob to confirm. Turn the knob, choose PORT U and push the knob to confirm.



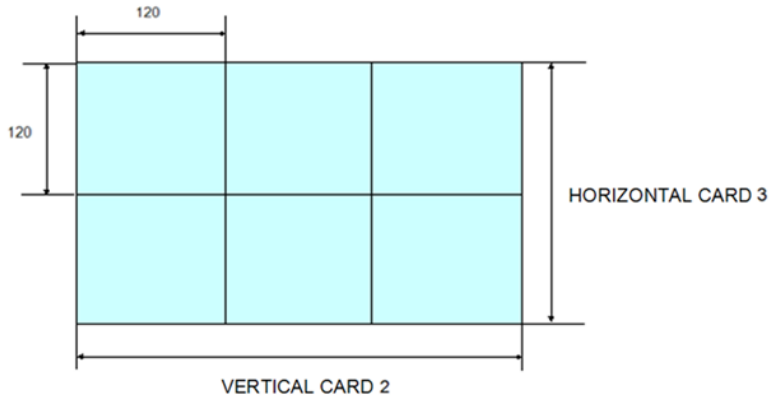
(7) Set the horizontal card, vertical card, width and height. For example, set horizontal card as 3, vertical card as 2, width and height as 120, shown as follows:



5. System Setup and Operations

How to Realize LED Screen Connection

>HEIGHT	120
Offset (A/B) X	0
Offset (A/B) Y	0
CONNECT CARD TYPE	>>



After setting, turn the knob and choose <CONNECT CARD TYPE> according to actual connection mode. New Driver support 8 kinds of connection modes, they are , , , , , , , and respectively.

HEIGHT	120
Offset (A/B) X	0
Offset (A/B) Y	0
>CONNECT CARD TYPE	>>

Send to receiver after choose the connection mode, observe the display screen and make sure if display image is correct. If wrong, change the connection types. Then connect the Port D or Port U of One Sending Card to LED Screen is finished.

(8) The setting for port D is same as the above setting.

Rendering is as follows:

5. System Setup and Operations

How to Realize LED Screen Connection

2. Connect the Port D and Port U of One Sending Card to LED Screen

(1) First, make sure the device is in normal operation. The red power indicator lights when device has power supply and the green signal indicator lights when device has signal input.

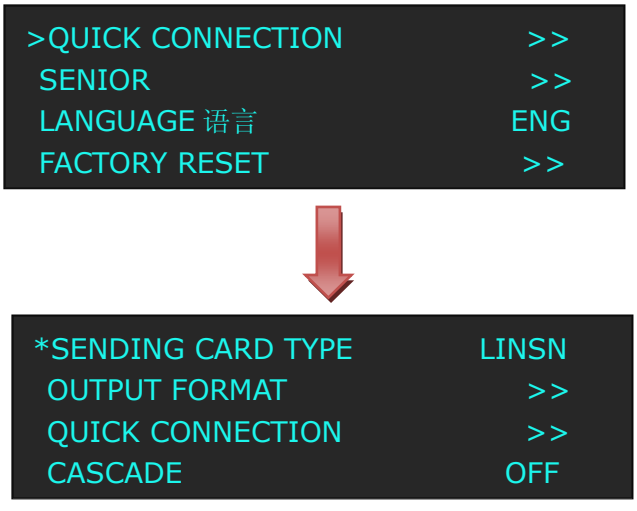
(2) Choose the input source, for example, DVI.

(3) Connect one cable to Port D, the other one to U.

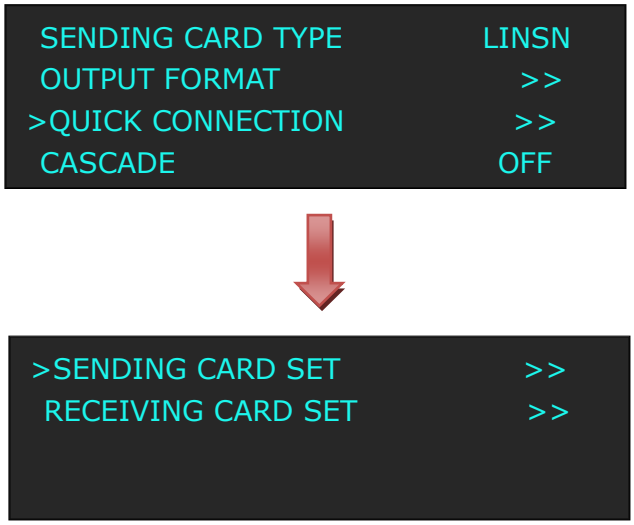
(4) Connect Port U to LED screen, the settings are same as Step 4 to Step 7 of "**Connect the Port D or Port U of One Sending Card to LED Screen**".

(5) Connect Port D to LED screen, the settings are as follows:

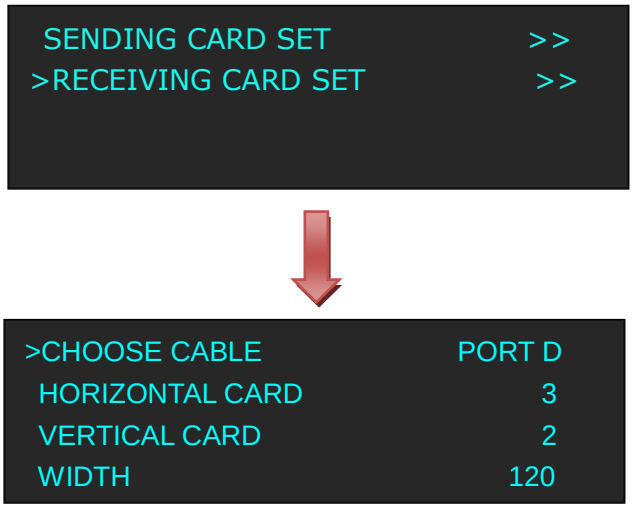
a. Turn the knob, choose <SENDING CARD TYPE> in <QUICK CONNECTION> option, push the knob to confirm, turn the knob, choose the sending card type, for example, Choose Linsn (New Driver can only support Linsn and Colorlight sending card, Nova sending card is only for brightness adjustment). Shown as follows:



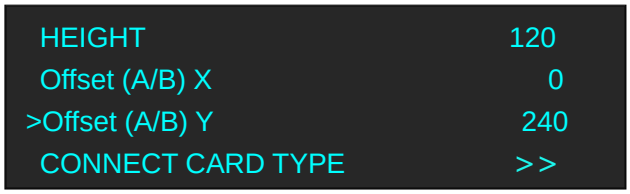
b. After setting, turn the knob, choose <QUICK CONNECTION>, push the knob to confirm for next setting, shown as follows:



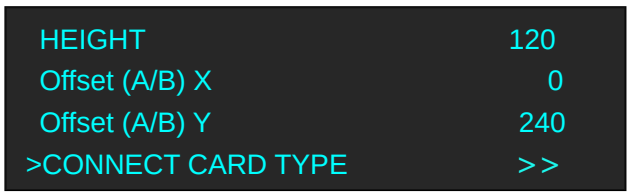
c. Turn the knob, choose <RECEIVING CARD SET>, push the knob to confirm. Turn the knob again, and choose <CHOOSE CABLE>, push the knob to confirm. Turn the knob, choose PORT D and push the knob to confirm.



d. Turn the knob, and choose <Offset (A/B) Y>, push the knob to confirm. Turn the knob, Set Offset (A/B) Y as 240 (Note: Offset (A/B) Y=VERTICAL CARD×HEIGHT, before we set vertical card as 2 and height as 120). Shown as follows:

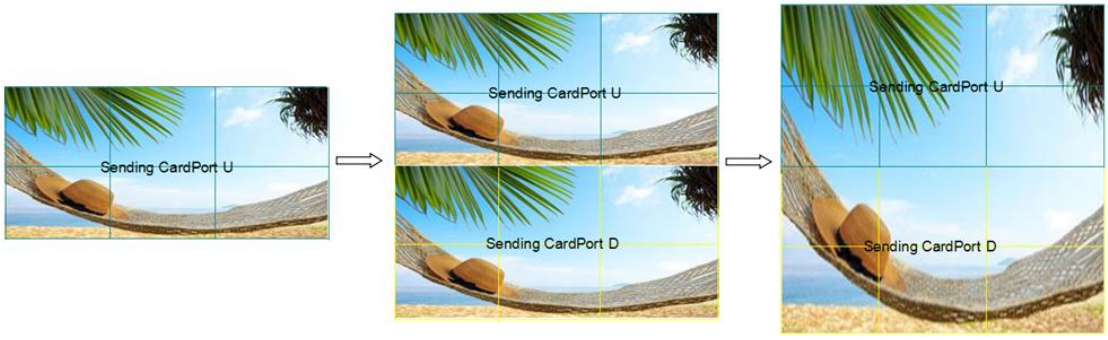


e. Turn the knob, and choose <CONNECT CARD TYPE>, shown as follows:



Choose the connection mode, the setting is same with Port U. Then connection of both the Port D and Port U of One Sending Card to LED Screen is finished.

Rendering is as follows:



A Specification

DVI Input	
Number of Inputs	1
Connector	Standard DVI-I socket
Supported Resolution	640 x 480 ~ 2560 x 1600（Depend on the sending card）
Format Standard	DVI 1.0
HDMI Input	
Number of Inputs	1
Connector	HDMI-A interface
Supported Resolution	640 x 480 ~ 2560 x 1600（Depend on the sending card）
Format Standard	HDMI 1.3
LAN Output	
Number of Outputs	2
Connector	LAN interface
Supported Resolution	640 x 480 ~ 2560 x 1600（Depend on the sending card）
Extras	
Power Supply	AC 100-240V 2A IEC-3
Working Environment	0℃~+40℃
Stored Environment	10%~85%
Size	480mm×249mm×45mm
Warranty	3 years parts and labor warranty

B Contact Information

Warranty:

All video products are designed and tested to the highest quality standard and backed by full 3 years parts and labor warranty. Warranties are effective upon delivery date to customer and are non-transferable. RGBlink warranties are only valid to the original purchase/owner. Warranty related repairs include parts and labor, but do not include faults resulting from user negligence, special modification, lighting strikes, abuse(drop/crush), and/or other unusual damages.

The customer shall pay shipping charges when unit is returned for repair.

Headquarter: S603~604 Weiye Building Torch Hi-Tech Industrial Development Zone Xiamen, Fujian Province, P.R.C

- **Tel:** +86-592-5771197
- **Fax:** +86-592-5771202
- **Customer Hotline:** 4008-592-315
- **Websites:**
  - ~ http://www.rgblink.com
  - ~ http://www.rgblink.cn
- **E-mail:** support@rgblink.com

C Sending Card Installation

RGBlink provides two kinds of New Driver, one is the device equipped with sending card, the other one is the device without sending card. Here we will introduce the installation steps of sending card, take LINSN for example.

In the device without sending card, we provide lines as follows, 11 pcs in all:

Double line: 3P, 30 cm, 2.54 pitch 1 pc

Double line: 4P, 3 cm, 2.54 pitch 2 pcs

Straight line: φ4.0 round head terminal, +5mm immersion, 1015-18 #/, yellow and green double color, 170 mm long 1 pcs

Audio line: 3.5mm audio line, male to male, 30 cm long 1 pcs

Double line: TJC8-2P double line, 600 mm long, red and black 2 pcs

IDC line: 2*5, 2.54 pitch, 400 mm long, color 1 pc

USB cable: USB A port to USB B port 1 pcs

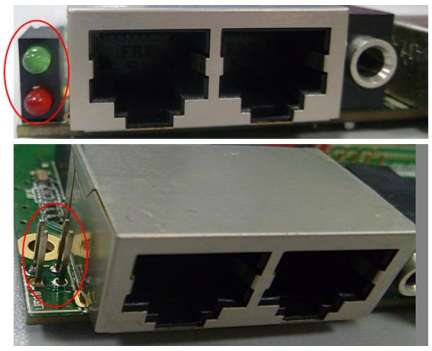
Double line: 30 cm long 2 pcs

Sending Card Panel Installation

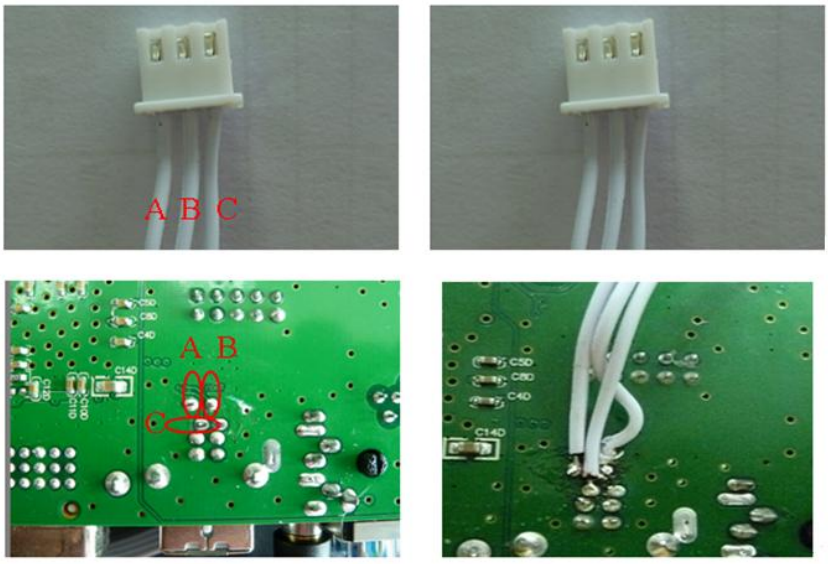
Please process the sending card panel before install the sending card. Operations are as

follows:

1. Take a piece of sending card, and remove the stand of the LEDs, weld on a 2*2 pin, 2.54 mm pitch row needle, as shown below (applicable to LINSN, Colorlight T7 and Nova sending card).



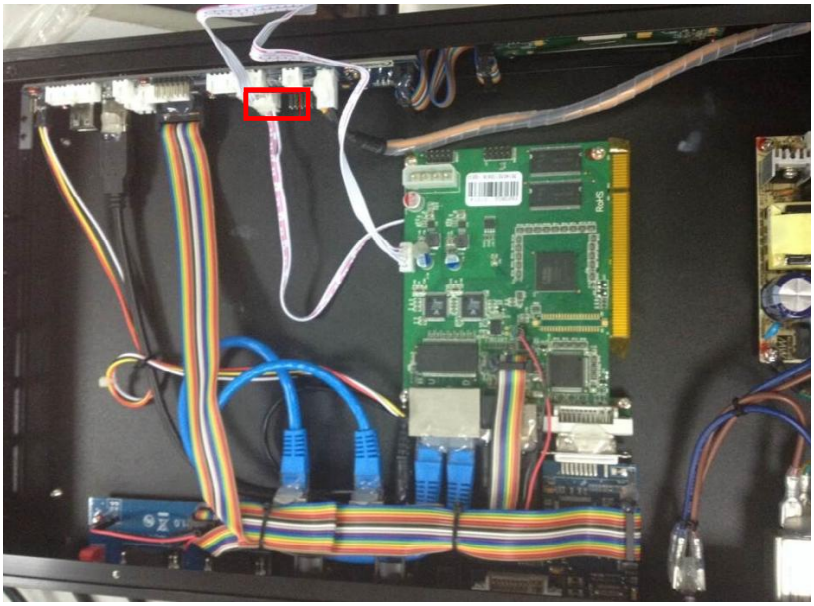
2. Take another sending card and a 3P double line (30 cm long, 2.54 pitch), cut one side of the stand, and weld to the back of sending card, as shown in the figure below:



Before Welding After Welding

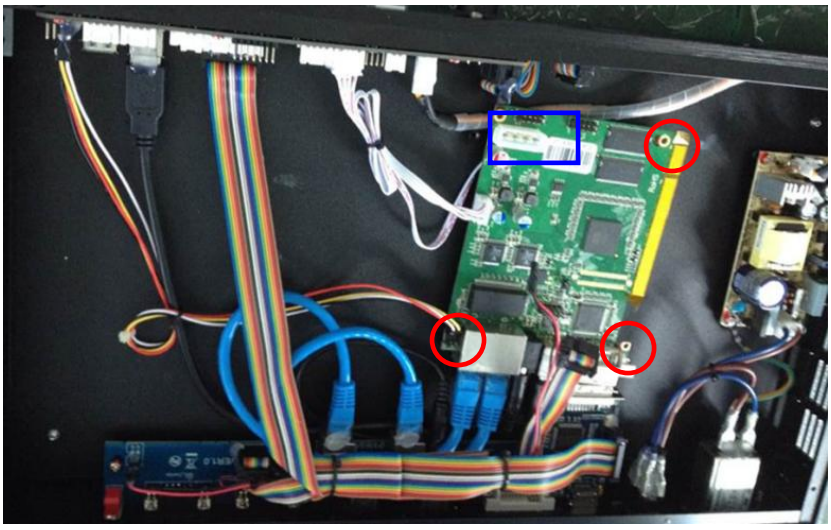
Note: Step 2 is only applicable for Linsn sending card.

3. After welding, connect the other end of 3P double line to the red box area of MCU board, as shown in the figure below:



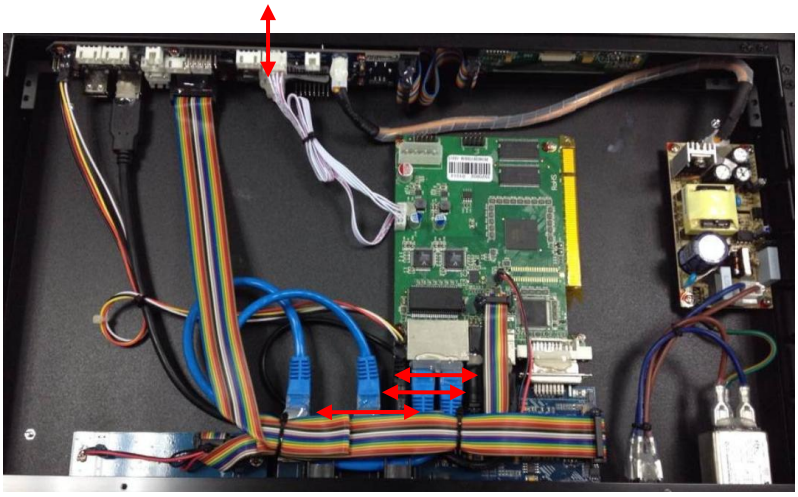
Linsn Sending Card Panel Installation

1. Lock Linsn sending card by 6 screws P (3*5), as shown in the below red circle, and by two screws (3*6) with a flat pad screws power ground, as shown in the blue box shown in the diagram below. Then take a terminal line (φ 4.0 round head terminal, +5 mm immersion, 1015-18 #/, yellow green double color line, 170 mm long), weld one end of the subline to the stand on network interface of sending card:

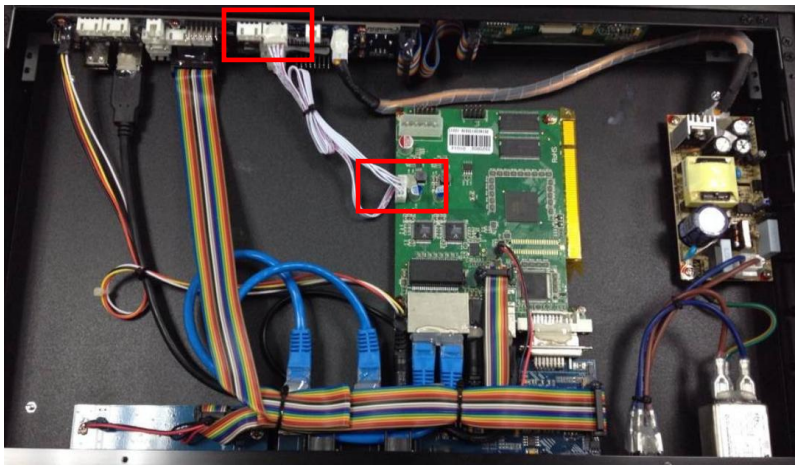


Note: Lock the sending card with welding line to the left position in the above figure.

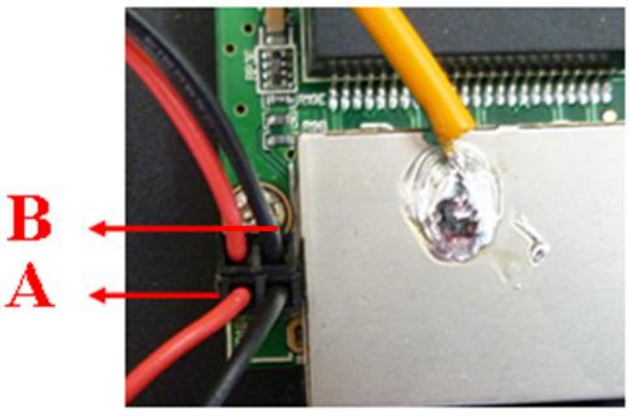
2. Set the dial switch of sending card, as shown in the following figure.

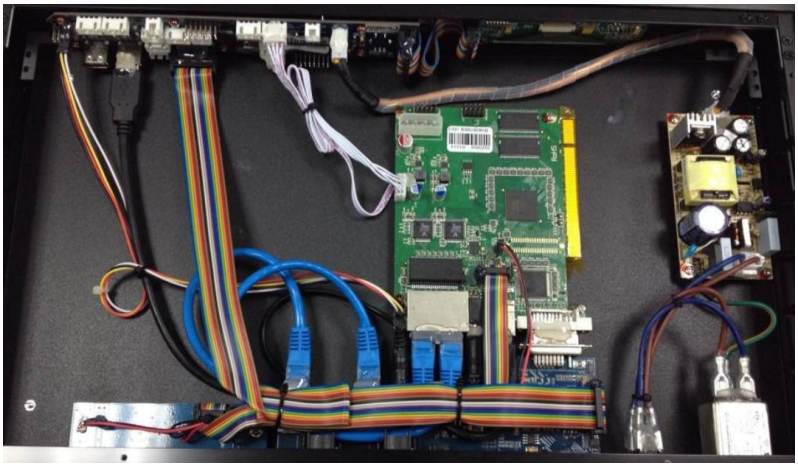


3. Connect the power line of sending card, (connect to the position marked LINSN POW of the MCU board), take a 4 pin 2.54 mm pitch cable, and connect referring to the following figure:

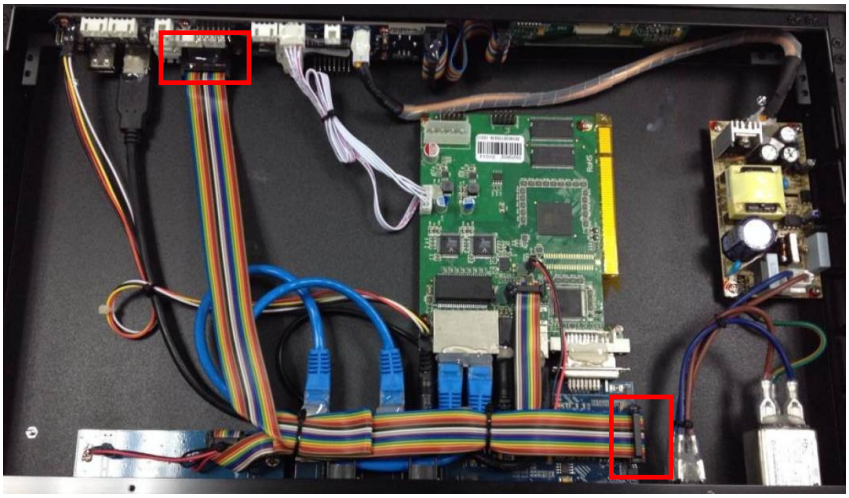


4. Connect the signal and power indicator light cable of sending card, take each 2 red and black lines, and connect 2 black lines to the end of MCU board (Part B), and connect 2 red lines near the edge of the MCU board (Part A). Please refer to the following figure:





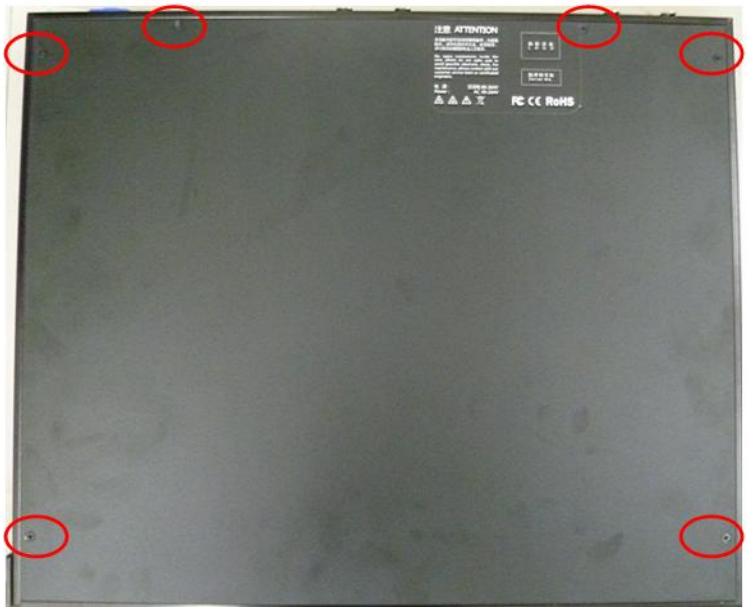
5. Connect (NEW DRIVER 2)-MCU board to (NEW DRIVER 2)-CON board with 2*8IDC line. Please refer to the following figure for more detailed connections:



6. Dispensing on each screw, and heat glue on each connection joints.

7. Finishing and binding the cables.

8. After it has been confirmed correct, cover the front panel, and fixed by 6 pieces of 3*5 black flat head screws, as shown in the figure below:


ATTENTION
FC CE RoHS